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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,479	02/02/2001	Guy Leclerc	50018 CIP	8765

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EXAMINER	
LAMBERTSON, DAVID A	

ART UNIT	PAPER NUMBER
1636	

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/775,479	LECLERC ET AL.	
	Examiner	Art Unit	
	David A. Lambertson	1636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 August 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 27-32 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 27-32 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Receipt is acknowledged of a reply to the previous Office Action, filed August 28, 2003. Amendments were made to the claims.

Claims 27-32 are pending and under consideration in the instant application. Any rejection of record in the previous Office Action, mailed February 26, 2003, that is not addressed in this action has been withdrawn.

Because this Office Action only maintains rejections set forth in a previous Office Action, this rejection is made FINAL.

Priority

Applicant's amendment to the priority claim is acknowledged. However, it is still necessary to indicate that PCT/CA97/00892 was published in English under PCT Article 21(2) to perfect the priority claim.

Sequence Compliance

Acknowledgement is made regarding Applicant's compliance with the sequence rules. However, it is noted that Applicant has not provided a statement under 37 CFR 1.821(g) indicating that no new matter is added as a result of the entry of the sequence listing. Failure to respond to these requirements will result in the Abandonment of the application under 37 CFR 1.821(g).

Claim Rejections - 35 USC § 112

Claims 27-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. **This rejection is maintained for the reasons set forth in the previous Office Action.**

Response to Arguments Concerning Claim Rejections - 35 USC § 112

Applicant's arguments filed August 28, 2003 have been fully considered but they are not persuasive. The arguments consist of the following points:

1. The Office has relied on a single article (O'Sullivan) for an assessment of the State of the Art; Applicant asserts that this single article is not representative of the State of the Art, and represents only one person's opinion (see the bridging paragraph of pages 5-6, the second full paragraph of page 7, and the bridging paragraph of pages 9-10 of Applicant's arguments). In particular, Applicant points out that O'Sullivan's statement, "We cannot be certain that this is the case," as it regards the predictability of the porcine animal model, could easily be replaced by: "We cannot be certain that this is **not** the case" (original emphasis).

2. The O'Sullivan article regards the use of gene therapy in treating restenosis, and the instant invention is not related to gene therapy techniques. Therefore, the O'Sullivan reference is not relevant to the instant invention. In contrast, the most widely accepted model in the field of intravascular disease is the porcine model demonstrated in the instant application (see the first and second full paragraphs of page 6 of Applicant's arguments).

3. The Examiner has unduly required **clinical and therapeutic efficacy** (original emphasis) from the instant invention, and these are not the standards used in the determination of enablement (see the paragraphs bridging pages 6-7 and pages 8-9 of Applicant's arguments).

4. The porcine model of restenosis is recognized by a panel of experts in the field of intravascular disease (Applicant's Attachment A), and has been recognized by the USPTO (in US 6,468,297; Applicant's Attachment E) as an art-accepted model for restenosis (see page 7, the last full paragraph of Applicant's arguments). Furthermore, the porcine model is the most widely used in the field of intravascular disease.

5. The time for sacrifice of the animals used in the porcine model is standard in the art, and that the 3-6 month period associated with restenosis in humans corresponds to the peak of reocclusion, but does not necessarily mean that reocclusion could not happen before this time (see page 9, first full paragraph of Applicant's arguments).

6. Numerous subsequent studies relating to the use of radioactivity to treat restenosis have demonstrated the technique to be safe and feasible (see page 9, second full paragraph of Applicant's arguments).

Applicant's arguments are not convincing for the following reasons:

1 and 4. Applicant's assertion that the O'Sullivan reference is not representative of the State of the Art is based solely in opinion because Applicant has not provided convincing evidence that the opinion does not reflect the State of the Art. The mere fact that a number of people use a particular model does not necessarily mean that the model is predictive.

Applicant suggests that Attachment A ("Consensus Report") establishes that the porcine model is predictive of functionality in humans. Applicant points to no such statement in the contents of the "Consensus Report" that makes the assertion; an inspection of the document by the Office has also failed to clearly identify such a statement. Rather, the search unveiled the following statements of Section 7.00(a):

> "At this early stage, sufficient data are not available to make quantitative recommendations as to the acceptability for listed parameters."

The statement then indicates that further data collection and correlation to clinical outcomes is necessary to permit future recommendations. This underscores the unpredictability of the porcine model for restenosis because it indicates that the acceptability of the model is questionable and requires further experimentation. In essence, it sets forth the same points raised in the previous Office Action: the nature of the invention requires further undue and unpredictable trial and error experimentation of an empirical nature.

Applicant further suggests that the USPTO has accepted the porcine model of restenosis because claims regarding the treatment of restenosis were issued in US Patent No. 6,468,297. Applicant is reminded that each Application is examined on its own merit, therefore the prosecution of US Patent No. 6,468,297 is immaterial to the instant case.

As it regards the ability to substitute the phrase, "We cannot be certain that this is **not** the case," (original emphasis) for O'Sullivan's chosen words, "We cannot be certain that this is the case," this is a semantical argument that does not indicate the use of the porcine model as predictable. Indeed, it again underscores the unpredictability of its use because it is uncertain if the model can or cannot be used in a predictable manner, regardless of the manner in which one chooses to make the statement. Furthermore, O'Sullivan chose the words, "We cannot be certain

that this is the case," for a reason, that being the porcine model for restenosis is not a predictable model for restenosis in humans, and it is improper to try and change those words *ex post facto*.

2. As it concerns the focus of the O'Sullivan reference on gene therapy, this is again a semantical argument. The reason why O'Sullivan says the model is unpredictable is not a property of gene therapy, *per se*, but rather a question as to whether restenosis as a process in the porcine model is predictable of restenosis in a human. It is this fact, the inability for restenosis to be predictably modeled for humans using a pig, which is focused on in questioning the enablement of the instant invention. As it regards that point, the O'Sullivan reference is acceptable because it points out that the time of sacrifice prior to measuring restenosis is not commensurate with the onset of restenosis in humans. Thus, the porcine model is unpredictable for treating restenosis as a whole, and not simply for gene therapy treatment of restenosis. This is because the entire process encompassing the onset of restenosis in a pig and its subsequent sacrifice to measure the inhibition of restenosis occurs prior to when restenosis begins in a human.

3. While it is agreed that the standard for enablement does not require clinical or treatment efficacy, it is untrue that Applicant is unduly being held to this standard. It is simply that the model used by Applicant is not predictable for its use in humans, and that in the absence of a predictable model or some indication of the efficacy in humans, that the invention is not enabled as claimed. If it were established that a model predictive of restenosis in humans was used, the use of the model would certainly substitute for functional data in humans. It is in these instances that methods of treatment are generally established as being enabled in the absence of data regarding humans. Unfortunately, it is established that the model used in the instant application

is not predictive of restenosis in humans, therefore the model and the claimed methods are not enabled.

5. While it may be the standard in the art to sacrifice pigs after 28 days following treatment of restenosis, this does not then make the model predictive of restenosis in humans. Rather, it underscores why the model is not predictive, because the period for restenosis between pigs and humans is so different. Neither of the references supplied (Attachments B and C) adequately addresses this issue, only showing that the pigs are routinely sacrificed at 28 days. Furthermore, the statement that reocclusion could happen before this time (referring to the onset of restenosis in humans following a 3-6 month period) does not lend any predictability to the claimed method. Rather, it casts a greater level of unpredictability regarding the use of the model to determine the enablement of the claimed invention. For instance, one would now need to be concerned with whether or not reocclusion had occurred in the individual being treated for restenosis prior to using the claimed method; otherwise the treatment would not be effective in the manner "predicted" by the porcine model. How one would determine this in practicing the invention is not set forth in the specification or the claimed method; therefore, this argument does not resolve the "how to make and use" issue set forth in the previous Office Action.

6. The numerous studies done subsequent to the instant study showing the treatment as being safe and feasible do not establish the State of the Art, or the enablement of the instant claims, at the time of invention. Therefore, these studies could not be used to demonstrate the enablement of the invention at the time of filing even if they were present in the response.

In conclusion, the rejection of claims 27-32 is maintained as set forth in the previous Office Action because Applicant's arguments regarding the porcine model of restenosis as it

regards the predictability of restenosis in humans were not persuasive. Applicant has opined that the O'Sullivan reference is not representative of the State of the Art; however, the references upon which they base their opinion do not indicate the predictability of the porcine model of restenosis for the reasons set forth above. Furthermore, the arguments provided by Applicant (e.g., that "We cannot be certain that this is **not** the case" regarding O'Sullivan's statement of the predictability of treating restenosis in humans based on results from the porcine model; and that reocclusion could happen before this time, regarding the onset of restenosis in humans at a time of 3-6 months following stenting) underscore the unpredictability of the claimed method. As a result, the rejection under 35 USC § 112, first paragraph is maintained.

Allowable Subject Matter

No claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Lambertson whose telephone number is (703) 308-8365. The examiner can normally be reached on 6:30am to 4pm, Mon.-Fri., first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Remy Yucel, Ph.D. can be reached on (703) 305-1998. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3014.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

David A. Lambertson, Ph.D.
AU 1636

JAMES KETTER
PRIMARY EXAMINER